# WLS28-2 Dual Color LED Strip Light

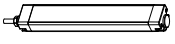
## Features



Banner's LED Strip Lights have sturdy aluminum housings, shatterproof windows, and impressive environmental ratings, making them an ideal general-purpose LED light for machine, enclosure, or other industrial lighting applications. Having two colors in one device make these ideal for mobile vehicle, machine status, and vision lighting applications.

- Low-profile, space-saving design
- Rugged, water-resistant IP69K option
- Available in eight lengths from 145 mm to 1130 mm
- Lensed models or choice of clear or diffuse window
- Daisy chain power to multiple lights
- Optional snap clips for easy installation and repositioning
- Optional switch for color selection and control
- Automatic temperature protection built into the unit. Above 50 °C, the light dims to manage heat and protect lifetime

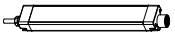
**NOTE:** When cascading lights, a model with a color selection switch can be used to control the lights cascaded off the switched model.



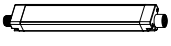
**Stand-Alone Light—cable**



**Stand-Alone Light or End Light in a Cascade—QD**



**First Light in a Cascade—cable**



**First or Middle of a Cascade—QD**

WLS28-2 LED Strip Lights are available as either stand-alone models, or as cascade models that can be "daisy-chained" together for a continuous length of lighting, with a minimum of wiring.

Stand-alone models have cable or male QD fitting at one end for power connection, no connections at opposite end. A stand-alone model may be used as the last in the cascade series.

Cascade models have cable or male QD fitting at one end for power connection, female QD fitting at opposite end for connection to other lights in the cascade. Cascade models with cable end can only be used as the first light in the cascade series. A double-ended accessory cordset must be used between each pair of lights in a cascade.

**IMPORTANT:** Read the following instructions before operating the light. Please download the complete WLS28-2 Dual Color LED Strip Light technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

**IMPORTANT:** Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los WLS28-2 Dual Color LED Strip Light, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

**IMPORTANT:** Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des WLS28-2 Dual Color LED Strip Light sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

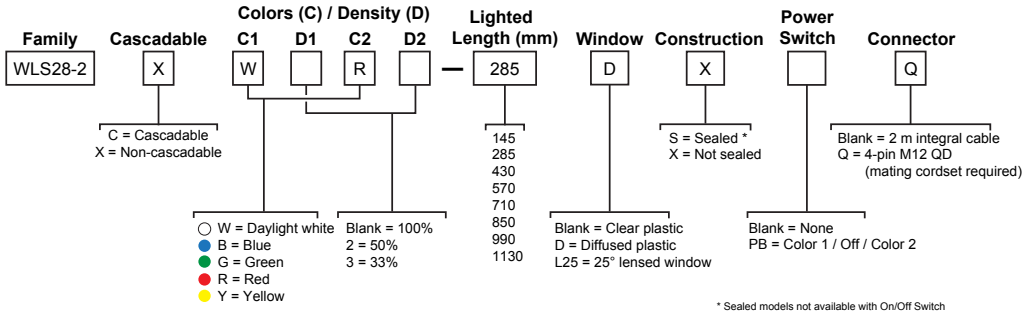
Original Instructions
15-Sep-25

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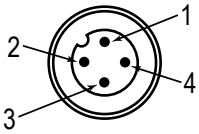
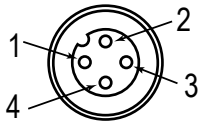
# Models




Density (D) is defined by the quantity of LEDs populated on the circuit. For example, at 100% density, there are 18 LEDs per 285 mm, and at 50% density, there are 9 LEDs per 285 mm. The lumen output decreases proportionally with density.

| Sample Model Number | Description |
|---|---|
| **WLS28-2XWR-570XQ** | Non-Cascade, White (100% Density), Red (100% Density), 570 mm, Unsealed, 4-pin M12 quick disconnect connector |
| **WLS28-2XWR-285SQ** | Non-Cascade, White (100% Density), Red (100% Density), 285 mm, Sealed, 4-pin M12 quick disconnect connector |
| **WLS28-2CWR-850XQ** | Cascadable, White (100% Density), Red (100% Density), 850 mm, Unsealed, 4-pin M12 quick disconnect connector |
| **WLS28-2XWR2-1130X** | Non-Cascade, White (100% Density), Red (50% Density),1130 mm, Unsealed, 2 m integral cable with flying leads |
| **WLS28-2XWR2-285XPBQ** | Non-Cascade, White (100% Density), Red (50% Density), 285 mm, Unsealed, Color 1 /OFF / Color 2 rocker switch, 4-pin M12 quick disconnect connector |

# Wiring

| Male | Female | Pin | Wire Color | Connection |
|---|---|---|---|---|
|  |  | 1 | Brown | Color 1: 12 V DC to 30 V DC |
| | | 3 | Blue | DC common |
| | | 4 | Black | Color 2: 12 V DC to 30 V DC (Color 2 overrides Color 1) |
| | | 2 | White | Not used |





# Specifications

**Operating Voltage**

12 V DC to 30 V DC

Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)

See electrical characteristics on product label

| Light Length (mm) | Typical Current (A) | | | Max. Current (A) |
|---|---|---|---|---|
| | 12 V DC | 24 V DC | 30 V DC | |
| 145 | 0.33 | 0.15 | 0.12 | 0.4 |
| 285 | 0.66 | 0.3 | 0.24 | 0.8 |
| 430 | 1.01 | 0.46 | 0.36 | 1.2 |
| 570 | 1.36 | 0.61 | 0.48 | 1.6 |
| 710 | 1.75 | 0.77 | 0.6 | 2 |
| 850 | 2.13 | 0.92 | 0.73 | 2.4 |
| 990 | 2.59 | 1.08 | 0.85 | 2.8 |
| 1130 | 3.04 | 1.24 | 0.97 | 3.2 |

**Light Characteristics - Daylight White**

Color Temperature (CCT): 4700–5300K

Lumen output: 475 (± 5%) per 285 mm, typical at 25 °C (77 °F)

CRI: 83, typical

**Light Characteristics - Other Colors**

| Color | Typical Wavelength or Color Temperature | Typical Intensity (per 285 mm) [1] |
|---|---|---|
| Red | 625 nm | 200 |
| Yellow | 590 nm | 150 |
| Green | 525 nm | 300 |
| Blue | 470 nm | 110 |

**Push Button**

II = Color 2

I = Color 1

0 = Off

**Connections**

Integral 4-pin M12 male quick-disconnect connector (4-pin connecting cordset required); or 2 m (6.5 ft) integral PVC-jacketed cable

Do not spray cable with high-pressure sprayer, or cable damage will result.

**Mounting**

(2) swivel brackets SMBWLS28RA included and (4) screws

**Construction**

Clear anodized aluminum housing; painted zinc end caps; polycarbonate window on clear and diffuse plastic models; acrylic window on L25 models; zinc plated steel brackets

[1] Lumen values are reduced by 25% on diffused window models.

**Environmental Rating**

IP50 (non-sealed models) or IP65, IP67, IP69K per ISO 20653 (sealed models)

**Vibration and Mechanical Shock**

Vibration 10-55 Hz 1.0 mm p-p amplitude per IEC 60068-2-6

Shock 15G 11 ms duration, half sine wave per IEC 60068-2-27

**Operating Temperature**

–40 °C to +70 °C (–40 °F to +158 °F)

Light output begins to decrease above 50 °C (122 °F) and will be approximately 65% of max intensity at 60 °C (140 °F) and 30% of max intensity at 70 °C (158 °F)

**Storage Temperature**

–40 °C to +70 °C (–40 °F to +158 °F)

**Certifications**

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c UL us LISTED

D

Sealed models only



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**Application Notes**

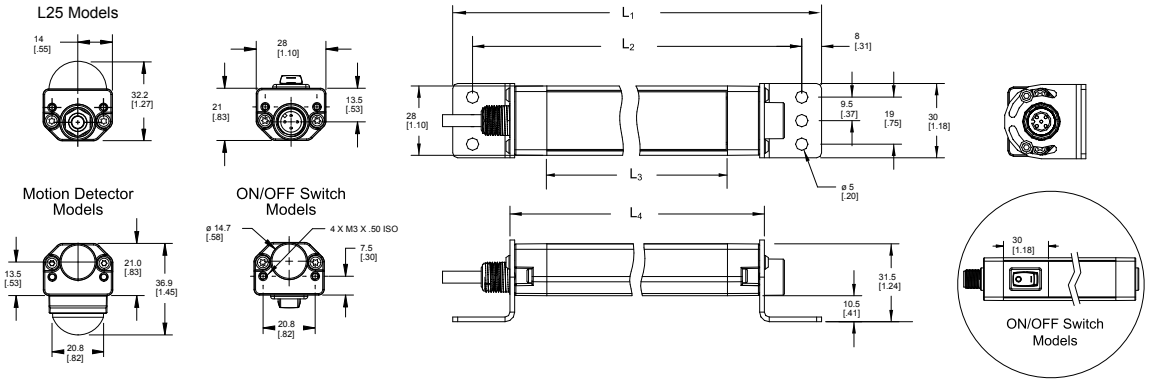
When connecting cascadable lights in series it is important not to exceed maximum current limitations:

Maximum length of light at 12 V DC: 1.4 m (4.6 ft)
Maximum length of light at 24 V DC: 3.0 m (9.8 ft)

Maximum length of light at 30 V DC: 3.1 m (10.2 ft)

# Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.




Dimensions are shown with the included SMBWLS28RA bracket.

*Non-Switch Models*

| IP50 Models | IP67/IP69K Models | $L_1$ | $L_2$ | $L_3$ | $L_4$ |
|---|---|---|---|---|---|
| WLS28-2..145X | WLS28-2..145S | 221 mm (8.7 in) | 205 mm (8.1 in) | 145 mm (5.71 in) | 175 mm (6.9 in) |
| WLS28-2..285X | WLS28-2..285S | 362 mm (14.3 in) | 346 mm (13.6 in) | 286 mm (11.26 in) | 316 mm (12.4 in) |
| WLS28-2..430X | WLS28-2..430S | 503 mm (19.8 in) | 487 mm (19.2 in) | 427 mm (16.81 in) | 457 mm (18.0 in) |
| WLS28-2..570X | WLS28-2..570S | 644 mm (25.4 in) | 628 mm (24.7 in) | 568 mm (22.36 in) | 598 mm (23.5 in) |
| WLS28-2..710X | WLS28-2..710S | 785 mm (30.9 in) | 769 mm (30.3 in) | 709 mm (27.91 in) | 739 mm (29.1 in) |
| WLS28-2..850X | WLS28-2..850S | 926 mm (36.5 in) | 910 mm (35.8 in) | 850 mm (33.46 in) | 880 mm (34.6 in) |
| WLS28-2..990X | WLS28-2..990S | 1067 mm (42 in) | 1051 mm (41.4 in) | 991 mm (39.02 in) | 1021 mm (40.2 in) |
| WLS28-2..1130X | WLS28-2..1130S | 1208 mm (47.6 in) | 1192 mm (46.9 in) | 1132 mm (44.57 in) | 1162 mm (45.7 in) |

*ON/OFF Switch Models*

| Model | $L_1$ | $L_2$ | $L_3$ | $L_4$ |
|---|---|---|---|---|
| WLS28-2..145XPB | 251 mm (9.9 in) | 235 mm (9.3 in) | 145 mm (5.71 in) | 205 mm (8.1 in) |
| WLS28-2..285XPB | 392 mm (15.4 in) | 376 mm (14.8 in) | 286 mm (11.26 in) | 346 mm (13.6 in) |
| WLS28-2..430XPB | 533 mm (21.0 in) | 517 mm (20.4 in) | 427 mm (16.81 in) | 487 mm (19.2 in) |
| WLS28-2..570XPB | 674 mm (26.5 in) | 658 mm (25.9 in) | 568 mm (22.36 in) | 628 mm (24.7 in) |
| WLS28-2..710XPB | 815 mm (32.1 in) | 799 mm (31.5 in) | 709 mm (27.91 in) | 769 mm (30.3 in) |
| WLS28-2..850XPB | 956 mm (37.6 in) | 940 mm (37 in) | 850 mm (33.46 in) | 910 mm (35.8 in) |
| WLS28-2..990XPB | 1097 mm (43.2 in) | 1081 mm (42.6 in) | 991 mm (39.02 in) | 1051 mm (41.4 in) |
| WLS28-2..1130XPB | 1238 mm (48.7 in) | 1222 mm (48.1 in) | 1132 mm (44.57 in) | 1192 mm (46.9 in) |

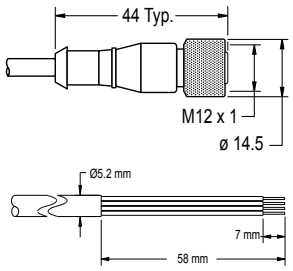
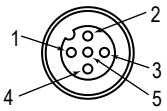
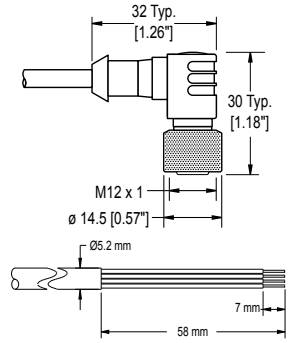
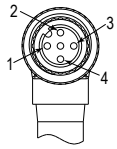
# Accessories

## Cordsets

Use single-ended cordsets between the power source and the QD connection of a stand-alone light or the first light in a cascade. Use double-ended cordsets between lights in a cascade.

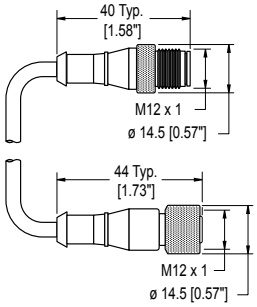
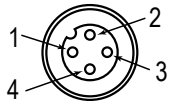
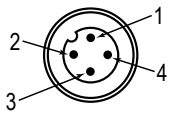

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**4-Pin Single-Ended M12 Female Cordsets**

| Model | Length | Style | Dimensions | Pinout (Female) |
|---|---|---|---|---|
| MQDC-406 | 2 m (6.56 ft) | Straight |  |  |
| MQDC-415 | 5 m (16.4 ft) | | | |
| MQDC-430 | 9 m (29.5 ft) | | | |
| MQDC-450 | 15 m (49.2 ft) | | | |
| MQDC-406RA | 2 m (6.56 ft) | Right-Angle |  |  |
| MQDC-415RA | 5 m (16.4 ft) | | | |
| MQDC-430RA | 9 m (29.5 ft) | | | |
| MQDC-450RA | 15 m (49.2 ft) | | | |

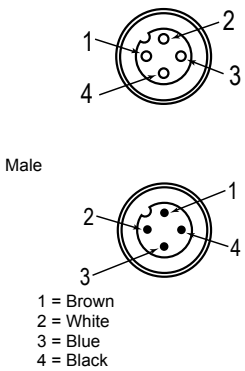
1 = Brown
2 = White
3 = Blue
4 = Black
5 = Not used

**4-Pin Double-Ended M12 Female to M12 Male Cordsets**

| Model | Length | Style | Dimensions | Pinout |
|---|---|---|---|---|
| MQDEC-401SS | 0.31 m (1 ft) | Male Straight/Female Straight |  |   |
| MQDEC-403SS | 0.91 m (2.99 ft) | | | |
| MQDEC-406SS | 1.83 m (6 ft) | | | |
| MQDEC-412SS | 3.66 m (12 ft) | | | |
| MQDEC-415SS | 4.58 m (15 ft) | | | |
| MQDEC-420SS | 6.10 m (20 ft) | | | |
| MQDEC-430SS | 9.14 m (30.2 ft) | | | |
| MQDEC-450SS | 15.2 m (49.9 ft) | | | |

Female
Male
1 = Brown
2 = White
3 = Blue
4 = Black

**4-Pin Flat Junction M12 Female Branch to M12 MaleTrunk Splitter Cordsets**

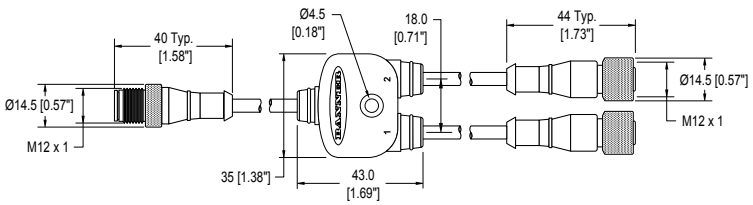
| Model | Branches (Female) | Trunk (Male) | Pinout |
|---|---|---|---|
| CSB-M1240M1240 | No branch | No trunk |  |
| CSB-M1240M1241 | 2 × 0.3 m (1 ft) | No trunk | |
| CSB-M1241M1241 | | 0.31 m (1 ft) | |
| CSB-M1248M1241 | | 2.44 m (8 ft) | |
| CSB-M12415M1241 | | 4.57 m (15 ft) | |
| CSB-M12425M1241 | | 7.60 m (25 ft) | |
| CSB-UNT425M1241 | | 7.60 m (25 ft) Unterminated | |
| CSB-M1243M1243 | 2 × 1 m (3.28 ft) | 1 m (3.28 ft) | |

Female
Male
1 = Brown
2 = White
3 = Blue
4 = Black

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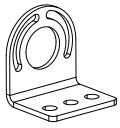
Continued from page 4

| 4-Pin Flat Junction M12 Female Branch to M12 MaleTrunk Splitter Cordsets | | | |
|---|---|---|---|
| **Model** | **Branches (Female)** | **Trunk (Male)** | **Pinout** |
|  | | | |

## Brackets

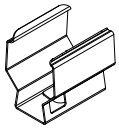
**SMBWLS28RA**

- Replacement end bracket kit
- 1.8 mm (14 gage) cold rolled steel with zinc plate, clear chromate finish
- Kit contains two end brackets and four screws



**SMBWLS28SP**

- Stainless steel snap bracket kit
- Includes two brackets

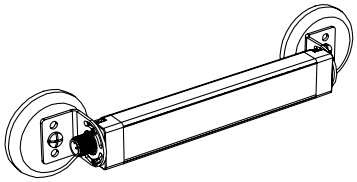


**SMBWLSMAG**

- Magnetic mounting bracket for easy attachment to steel surfaces

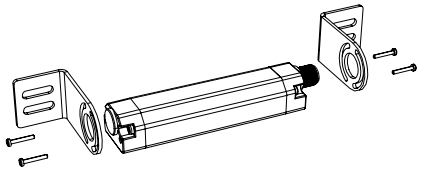
**SMBWLSMAGR**

- Protective cover also available to prevent scratches to painted surfaces



**SMBWLS28SM**

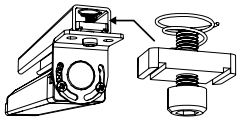
- End bracket kit
- Cold Rolled Steel with a clear zinc finish
- Allows the light or switch to be mounted at a right angle to the mounting surface
- Kit contains two end brackets and four screws



**SMH1316**

This kit allows the light or switch to be mounted to a 13/16-inch Unistrut channel. Light is shown. The kit includes:

- #10-32 spring nuts (qty 2)
- #10-32 socket head cap screws (qty 2)
- #10 lock washers (qty 2)



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For patent information, see www.bannerengineering.com/patents.

## Mexican Importer

Banner Engineering de Mèxico, S. de R.L. de C.V. | David Alfaro Siqueiros 103 Piso 2 Valle oriente | San Pedro Garza Garcia Nuevo Leòn, C. P. 66269

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